(Slip Opinion)

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BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)	
Knauf Fiber Glass, GmbH	)	PSD Appeal Nos. 99-8 through 99-72
PSD Permit No. 97-P0-06	)	

[Decided March 14, 2000]

ORDER DENYING REVIEW

Before Environmental Appeals Judges Scott C. Fulton, Ronald L. McCallum, and Kathie A. Stein.

KNAUF FIBER GLASS, GmbH

PSD Appeal Nos. 99-8 through 99-72

ORDER DENYING REVIEW

Decided March 14, 2000

Syllabus

This decision addresses the remaining petitions for review that have challenged the revised prevention of significant deterioration ("PSD") permit issued by Shasta County, California, Air Quality Management District ("SCAQMD") to Knauf Fiber Glass, GmbH, a corporation that plans to construct a new fiberglass manufacturing facility in the City of Shasta Lake, California. This is the second time a SCAQMD PSD permit decision for the proposed Knauf facility has come before the Environmental Appeals Board. In the first round of petitions, the Board issued a decision that denied review of many issues raised on appeal but remanded SCAQMD's permit decision on two issues: the best available control technology ("BACT") determination for PM_{10} and environmental justice. *See In re Knauf Fiber Glass, GmbH*, PSD Appeal Nos. 98-3 through 98-20 (EAB, Feb. 4, 1999), 8 E.A.D. __ ("*Knauf I*"). SCAQMD completed the remand proceedings on August 17, 1999, and issued a revised permit decision for the Knauf facility. The second round of petitions for review followed. Some of the petitions for review were previously dismissed on grounds of timeliness and standing. *See In re Knauf Fiber Glass, GmbH*, PSD Appeal Nos. 99-8 through 99-72 (EAB, Jan. 3, 2000) (Order Dismissing Certain Appeals on Timeliness and Standing).

Petitioners challenge the revised BACT determination for PM_{10} and the environmental justice analysis, as well as several miscellaneous issues.

HELD:

Review is denied of the petitions for review for the following reasons:

C Many of the petitions for review fail to meet the Board's requirement that issues be raised with specificity. (Section II.A.1.)

- Most of the miscellaneous issues raised in the petitions for review are outside the scope of review for this post-remand appeal. The Board's decision in *Knauf I* was final as to all issues associated with the PSD permit for the proposed Knauf facility, with the exception of two: BACT for PM_{10} and environmental justice. The only exception to the limitation on the scope of review is for issues pertaining to permit conditions that were modified during the remand period. (Section II.A.3)

- In contrast to the documentation in the administrative record for *Knauf I*, the supplemental BACT analysis and revised BACT determination provide ample support for SCAQMD's final decisions on BACT and the revised permit conditions on PM_{10} emissions. On remand, SCAQMD revised the PM_{10} BACT emission limitation downward from 5.37 lbs/ton to 3.5 lbs/ton and from 43.6 lbs/hr to 28.4 lbs/hr. SCAQMD adequately explained how it reached its decisions regarding PM_{10} control technology and the PM_{10} emission limitation. (Section II.B.)

- The environmental justice analysis prepared during the remand period concludes that the proposed Knauf facility will not have disproportionately high or adverse human health or environmental effects on a minority or low-income population. None of the petitioners have shown that the anticipated PM_{10} emissions from the proposed facility would in fact lead to an adverse impact. With regard to petitioners' contentions regarding public participation in this permit process, the Board notes that the public's involvement was effective in securing an environmental benefit through a lower PM_{10} emission limitation. (Section II.C.)

- The new National Emissions Standards for Hazardous Air Pollutants ("NESHAP") rule applicable to the fiberglass manufacturing industry was appropriately cross-referenced in a revised permit condition in this instance. (Section II.D.)

Before Environmental Appeals Judges Scott C. Fulton, Ronald L. McCallum, and Kathie A. Stein.

Opinion of the Board by Judge McCallum:

This case is an appeal of an air permitting decision made by the Shasta County, California, Air Quality Management District

("SCAQMD"). The SCAQMD issued a preconstruction permit and authority to construct under the federal Clean Air Act prevention of significant deterioration ("PSD") program to Knauf Fiber Glass, GmbH, a corporation that plans to construct a new fiberglass manufacturing facility in the City of Shasta Lake, California. This is the second time a SCAQMD PSD permit for the proposed Knauf facility has come before the Environmental Appeals Board ("Board"). In a previous appeal, the original PSD permit issued by SCAQMD was challenged by several private citizens, citizens' groups, and by EPA Region IX. The Board issued a decision in that case in February 1999, denying review of many issues raised on appeal, but also remanding SCAQMD's permit decision on two issues. *In re Knauf Fiber Glass, GmbH*, PSD Appeal Nos. 98-3 through 98-20 (EAB, Feb. 4, 1999), 8 E.A.D. __ (*"Knauf I"*). On August 17, 1999, SCAQMD completed the remand proceedings and issued a new permit decision for the Knauf facility. The Board subsequently received sixty-five (65) petitions for review of the August 1999 permit decision. Those petitions constitute the present appeal.

I. *BACKGROUND*

The SCAQMD processes permit applications and issues permits in Shasta County, California, under the federal PSD program pursuant to a delegation agreement with the U.S. EPA.[1] The PSD permit program is an element of the Clean Air Act ("CAA") that requires preconstruction review and approval for new and modified major stationary sources. CAA § 165, 42 U.S.C. § 7475. As outlined in our

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[1]U.S. EPA delegated authority to the SCAQMD to administer the federal PSD program in 1985. The permits that SCAQMD issues pursuant to that delegation are considered federal permits subject to federal permitting procedures, including the potential for review by the Environmental Appeals Board under 40 C.F.R. § 124.19. *See In re RockGen Energy Center*, PSD Appeal No. 99-1, slip op. at 3 n.1 (EAB, Aug. 25, 1999), 8 E.A.D. __; *Knauf I*, slip op. at 3; 40 C.F.R. § 124.41 ("when EPA has delegated authority to administer [permitting] regulations to another agency * * *, the term *EPA* shall mean the delegate agency and the term *Regional Administrator* shall mean the chief administrative officer of the delegate agency.")

previous decision regarding the planned Knauf facility, the PSD review process involves several technical analyses and determinations as well as specific procedural requirements designed to implement the CAA's emphasis on public participation and input. *Knauf I*, slip op. at 4-5.

The PSD review process for the proposed Knauf facility officially began in March 1997, when Knauf first submitted a PSD permit application to SCAQMD. The proposed facility is subject to PSD review due to its anticipated emissions of particulate matter less than 10 micrometers in diameter ("PM_{10}").[2] During the course of the original review process, SCAQMD conducted analyses of best available control technology ("BACT") and air quality impacts relating to PM_{10}. In addition, SCAQMD solicited comment on the terms of a draft permit for the proposed facility and held a public hearing. *See Knauf I*, slip op. at 6 (providing details of SCAQMD's administrative review of the Knauf permit application in 1997-1998). After issuing a final permit decision in March 1998, several individuals and entities filed petitions for review with the Board, seeking our review of SCAQMD's permit decision and elements of its review process.

Knauf I examined several aspects of SCAQMD's original PSD review process. We denied review of all of the issues raised in the appeal with the exception of two items for which we felt that SCAQMD's decisions were not adequately justified on the record. *Knauf I*, slip op. at 72. The two items that warranted a grant of review were: (1) the PM_{10} BACT determination, and (2) conclusions regarding environmental justice. *Id.* The Board remanded the PSD permit to SCAQMD to provide supplemental analyses of these items and to make the analyses available for public comment. *Id.* The Board specifically limited the scope of the remand to these two issues. Although the Board expressly allowed for appeals upon conclusion of the remand procedures,

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[2]PSD review is triggered for PM_{10} if a source has the potential to emit 15 tons per year or more of PM_{10} emissions. 40 C.F.R. § 52.21(b)(23)(i). The annual PM_{10} emissions from the proposed Knauf facility are well above this threshold.

we also cautioned that "[t]he subject matter of any such appeal must be limited to the issues identified in the remand order." *Id.* at 73.

During the remand period, SCAQMD prepared and/or obtained the supplemental analyses required by the Board's order. SCAQMD also prepared a revised draft permit, and made the revised permit, along with the supplemental analyses, available for public comment in April 1999. On June 2, 1999, SCAQMD held a public hearing on the revised permit. SCAQMD issued a final revised permit along with two response to comments documents on August 17, 1999. *See* Federal Prevention of Significant Deterioration (PSD) Authority to Construct (Aug. 17, 1999) ("Revised Permit"); Response to Comments, Written Comments Submitted During Public Comment Period ("Resp. to Comments"); Response to Comments, Public Hearing 6/2/99 ("Public Hear. Resp.").

During September 1999, the Board received sixty-five (65) petitions for review regarding the revised permit for the proposed Knauf facility.[3] Sixty-four (64) of these petitions were filed by citizens or

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[3]The petitioners (and corresponding appeal numbers) are: Robert Rollins (99-8), Colleen Leavitt (99-9), Mary Scott (99-10), David Nigro & Paula Hetzler (99-11), Debra Kaut (99-12), Betty Doty (99-13), Dorothy Kearsley (99-14), Walter May (99-15), Citizens for Cleaner Air et al. (99-16), Arnold Erickson (99-17), Russ Wade (99-18), Earl Hastings (99-19), Doreen Hastings (99-20), Ivan Hall (99-21), Barbara Frisbie (99-22), Stuart Oliver (99-23), Stuart Oliver & Jonathan McInteer (99-24), Radley Davis (99-25), Judy Sills (99-26), James Sills (99-27), April Frank (99-28), Warren Teel (99-29), Sharon Bellomo (99-30), Dwight Bailey (99-31), William Caraway (99-32), Vicki Caraway (99-33), Dara Caraway (99-34), Joanna Caul & Richard Sanford (99-35), Robert DiGiulio (99-36), Robert & Constance Hegge (99-37), Heidi Silva (99-38), Suzanne Auteni-Tony (99-39), Rhonda Posey (99-40), Gloria Zeller (99-41), Jim Price (99-42), Judy Hansen (99-43), Barbara Condon (99-44), Elizabeth Ballou (99-45), Joseph & Lillian Hernandez (99-46), Bonnie Rule (99-47), Cindy Christie (99-48), Aracelia Briggs (99-49), Rebecca Christie (99-50), Becky Wilson (99-51), Ron Pearsall (99-52), George McArthur (99-53), Georgette McArthur (99-54), James Melby (99-55), Carolyn Singelmann (99-56), Fulton Doty (99-57), Nadine Stutsman (99-58), Patricia Cogburn (99-59), Bryan Jones (99-60), Orville & Juanita Vanderzanden (99-61), Doreen Melby

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citizens' groups who oppose the Knauf facility. One petition was filed by another fiberglass manufacturer, CertainTeed Corporation. Most of the citizen petitions request that the Board deny the permit issued to Knauf.

At the Board's request, SCAQMD prepared responses to each of the petitions for review.[4] Petitioners were subsequently granted the opportunity to file replies to the SCAQMD responses. Notice to All Petitioners and Order Granting Motions for Leave to File Reply Briefs (Nov. 16, 1999). EPA Region IX, which was a petitioner in *Knauf I*, but did not file a petition for review of the revised permit decision, sought permission to file an amicus brief in this proceeding. The Board granted that request. Order Granting Motion for Leave to File Amicus Brief (Nov. 10, 1999). The amicus brief represents the views of Region IX, EPA's Office of Air and Radiation, and EPA's Office of Environmental Justice. Amicus Brief of EPA Region IX, EPA Office of Air and Radiation, and EPA Office of Environmental Justice in Support of Shasta County, California, Air Quality Management District's Response to Petitioners ("EPA Amicus Brief").

Through its responses to the petitions for review, SCAQMD challenged several petitions on the threshold regulatory requirements of timeliness and standing. The Board reviewed all of the petitions for compliance with the timeliness and standing requirements and issued an order dismissing several of the petitions for review on timeliness and

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[3](...continued)
(99-62), Linda Andrews (99-63), Jeffrey Lewellyn (99-64), Barbara Jo Garner (99-65), CertainTeed Corp. (99-66), Justin Jones (99-67), Hans Ortlieb (99-68), Tillie Smith (99-69), Laurie O'Connell & Ed Barger (99-70), Joy Newcom (99-71), Fulton Doty (99-72). Specific petitions are cited herein as "Petition [#]."

[4]SCAQMD's responses are cited herein as "Resp. to Petition [#]." We refer to specific pages within the response by the administrative record page number, i.e., (AR #).

standing grounds. Order Dismissing Certain Appeals on Timeliness and Standing (Jan. 3, 2000).[5]

II. *DISCUSSION*

A. *Scope of Review*

1. *Preliminary Requirements*

In determining whether to grant review of a petition for review of a PSD permit, the Board first looks to whether the petition meets the threshold procedural requirements of the permit appeal regulations. *See* 40 C.F.R. § 124.19; *In re Sutter Power Plant*, PSD Appeal Nos. 99-6 & 99-73, slip op. at 8 (EAB, Dec. 2, 1999), 8 E.A.D. __. The threshold procedural requirements include timeliness, standing, and preservation of an issue for review.

As discussed above, the Board issued an earlier order dealing with timeliness and standing.[6] In that order, we noted that we also expect petitions for review to meet a minimum standard of specificity. *See* Order Dismissing Certain Appeals on Timeliness and Standing at 2 n.1 (Jan. 6, 2000); *citing In re Envotech, L.P.*, 6 E.A.D. 260, 267 (EAB 1996). To meet the specificity requirement, petitioners must include specific information supporting their allegations. Petitions for review may not simply repeat objections made during the comment period; instead they must demonstrate why the permitting authority's response to those objections warrants review. *Sutter*, slip op. at 10; *In re Encogen*

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[5]The January 3 order disposed of the following petitions for review in their entirety: 99-12, 99-25 through 99-28, 99-31, 99-39 through 99-52, 99-55, 99-56, 99-60 through 99-62, 99-64, 99-65, 99-67, 99-70. Supplemental letters in support of petition numbers 99-17 and 99-38 were also dismissed.

[6]The threshold procedural requirement that issues be properly preserved for review is not contested in this case.

Cogeneration Facility, PSD Appeal Nos. 98-22 through 98-24, slip op. at 11 (EAB, Mar. 26, 1999), 8 E.A.D. __.

As we explained in *Knauf I*, the Board broadly construes petitions filed by persons unrepresented by legal counsel. *Knauf I*, slip op. at 9. While the Board expects such petitions to meet the requirement of specificity, it does not expect those petitions to contain sophisticated legal arguments or to employ precise technical or legal terms. *Id.; Sutter*, slip op. at 10. For purposes of specificity, the Board expects such petitions to clearly identify the issue being raised and to provide some supportable reason as to why review is warranted. *Knauf I*, slip op. at 9; *Sutter*, slip op. at 11.

In this case, many of the petitions for review fall far short of even this generous approach to specificity. Most of the petitions do not identify even one particular permit condition as a basis for an appeal. While many of the petitions for review allude to the two issues that were the subject of the Board's remand order, i.e., BACT and environmental justice, few of them discuss why SCAQMD's written responses on these issues are incorrect or inadequate. It is clear from reading all of the petitions for review, that the petitioning citizens and citizens' groups feel strongly that the Knauf facility, at least as currently designed, is inappropriate for the Shasta Lake community. We respect the petitioners' right to voice their objections, but for us to fairly and accurately examine the merits of this appeal, we must insist that minimum specificity standards are adhered to.

There are nonetheless, approximately one dozen petitions for review that satisfy the preliminary requirements, including specificity. These petitions fairly represent the overall collection of petitions for review filed by citizens and citizens' groups. Of these, certain petitions for review do a particularly good job of highlighting the issues and objections to SCAQMD's responses. For purposes of brevity and clarity, we will refer only to selected petitions in our discussion of the merits on the issues before us. We view the petitions cited herein as representative

of the entire collection of citizens' petitions meeting the preliminary requirements.

2. *Standard of Review for a Grant or Denial of Review in a Permit Appeal*

If the preliminary requirements have been satisfied, the Board will determine whether a petition for review shows that the permit decision in question was based on a clearly erroneous finding of fact or conclusion of law, or if the decision involves an important policy consideration or exercise of discretion that warrants review. 40 C.F.R. § 124.19(a); *Knauf I*, slip op. at 9. If either of these conditions is met, the Board will grant review and potentially remand the permit decision. If neither of the conditions is met, the Board denies review of the petition.

The above standard of review is applied stringently in practice, in keeping with the directive in the preamble to section 124.19 that the "power of review should be only sparingly exercised" and "most permit conditions should be finally determined at the [permitting authority] level." 45 Fed. Reg. 33,290, 33,412 (May 19, 1980). Thus, it is infrequent that the Board will grant review in a permit appeal. The Board exercises this authority only when the petitions for review and the administrative record are abundantly persuasive that the Board's active involvement in the matter is warranted.

3. *Limitations on Scope of Review Established by the Remand Order*

In this case, the potential for a grant of review is also limited by the *Knauf I* decision. That decision was final as to all issues associated with the PSD permit for the proposed Knauf facility, with the exception of two: BACT and environmental justice. Those are the issues that were the subject of our remand order to SCAQMD, and are the focus of this decision. As noted above, the *Knauf I* decision explicitly limited any post-remand appeals to those two issues. *Knauf I*, slip op. at 73.

Therefore, we decline review of the abundance of miscellaneous issues raised in the petitions for review. Some of the issues outside the scope of review for this post-remand appeal are issues that were specifically addressed and for which review was denied in *Knauf I*. This category includes issues such as: concerns about federal and state air quality standards, permit limits on hazardous air pollutant emissions, the PM_{10} mitigation plan, the desire for an environmental impact statement under the National Environmental Policy Act, and use of local landfills for waste disposal. In addition, the petitions for review raise some new issues that were not before us in *Knauf I*. Such issues may not be raised at this juncture because the scope of the remand was expressly limited. All other issues pertaining to this PSD permit should have been raised at the time of the first appeal. Issues raised outside of the appeals period on the original permit are considered untimely. *See Knauf I*, slip op. at 8 n.9 (new issues raised in reply briefs are equivalent to late filed appeals and must be denied as untimely).

The only exception to the limitation on the scope of review as established by the remand order is for issues pertaining to permit conditions that were modified during the remand period. Such permit conditions may qualify for review because the conditions have not been previously subject to the appeal process. In this case, an issue has been raised regarding SCAQMD's modification of the permit in light of the National Emission Standards for Hazardous Air Pollutants ("NESHAP") for the fiberglass manufacturing industry. *See* 64 Fed. Reg. 31,695 (June 14, 1999). The fiberglass NESHAP was promulgated in June 1999, during the remand period, and we may examine the issue raised in the petitions for review regarding the permit's consistency with this regulation.

The next section of the Discussion describes the revised BACT determination reached by SCAQMD during the remand period and addresses issues raised in the petitions for review regarding this determination. Following that, we address the arguments regarding environmental justice and how that concept relates to this case. Last, we

look at the issue of how the revised permit addresses the fiberglass NESHAP.

B. *BACT*

The Clean Air Act and the PSD regulations require that "best available control technology" be employed on facilities subject to PSD review. CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4); 40 C.F.R. § 52.21(j)(2). These requirements are implemented through a BACT analysis and, ultimately, a BACT determination issued by the permitting authority. The BACT determination typically consists of selecting an emission limitation based on a specified control technology for control of a particular air pollutant. *Knauf I*, slip op. at 11.

In *Knauf I*, we remanded SCAQMD's original BACT determination for PM_{10} because we found deficiencies in how the control technology and emission limits for the proposed Knauf facility were selected. *Knauf I*, slip op. at 27. The documentation on SCAQMD's BACT determination did not demonstrate that SCAQMD had fully considered the PM_{10} control technologies and emission limits at other fiberglass manufacturing facilities. *Id.* In addition, commenters in the original permit proceeding had raised questions regarding configuration and size of the particular pollution control equipment selected. We held that SCAQMD had not adequately considered these comments and had not convinced us that either the particular design of the control technology or the specified emission limit constituted BACT. *Id.*

Our remand order instructed SCAQMD to identify multiple PM_{10} control options and to thoroughly document its analysis of the potential control options. *Knauf I*, slip op. at 72. During the remand period, Knauf prepared and submitted a supplemental BACT analysis to SCAQMD. Mostardi-Platt Assoc., Supplemental Best Available Control Technology Analysis for PM_{10} (Feb. 1999) ("Supp. BACT Analysis"). SCAQMD subsequently revised its BACT determination. Authority to Construct/PSD Permit Evaluation (Apr. 1999) ("Revised Evaluation").

In contrast to the documentation in the administrative record for *Knauf I*, these new documents provide ample support for SCAQMD's final decisions on BACT and the revised permit conditions on PM_{10} emissions. The supplemental BACT analysis, for example, identifies PM_{10} control technologies and emission limits for five other fiberglass manufacturing facilities. Supp. BACT Analysis at 10. Knauf's original permit application identified only one other facility for comparison purposes, a Knauf plant located in Alabama. *See Knauf I*, slip op. at 18. The supplemental analysis also addresses the technical feasibility of six types of control options. Supp. BACT Analysis at 11-14. The original permit application contained no technical feasibility discussion at all. *See Knauf I*, slip op. at 19.

SCAQMD's documentation of its BACT determination is also much improved. SCAQMD details the PM_{10} control technologies used by five other fiberglass manufacturing facilities. Revised Evaluation at 14-16. SCAQMD also assesses the efficiencies of the various control options, *Id.* at 18-19, and concludes that energy, environmental, and economic impacts would not justify selection of a control option other than the top option. *Id.* at 20. None of these features were included in SCAQMD's previous evaluation document. *See Knauf I*, slip op. at 19-20 (description of SCAQMD's justification for its original BACT determination).

The supplemental BACT analysis and SCAQMD's revised evaluation resulted in revised permit conditions governing PM_{10} emissions from the main stack of the proposed Knauf facility. Table 1 compares the PM_{10} control technology and emission limits as expressed in the original and revised permits.

TABLE 1

Comparison of PM_{10} Permit Limits

	Control Technology	**PM_{10} Emission Limit**	**Source**
SCAQMD Permit Decision (3/30/1998)	7 venturi scrubbers; WEP*	43.6 lbs/hr 5.37 lbs/ton[7]	¶ 48a, 53
SCAQMD Revised Permit Decision (8/17/1999)	Knauf process technology; 7 venturi scrubbers; WEP	28.4 lbs/hr 3.5 lbs/ton	¶ 47, 52

*Wet Electrostatic Precipitator

The revised BACT determination, as reflected in the revised permit, differs from the original in two ways. First, SCAQMD has chosen to list "Knauf process technology" as a component of BACT. SCAQMD noted that each of the fiberglass facilities considered in the course of the supplemental BACT analysis use proprietary process controls, which have some effect on the amount of PM_{10} emissions generated prior to any add-on pollution control technology.[8] Revised Evaluation at 17. Second, the revised permit lowers the PM_{10} emission limit from 5.37 lbs/ton to 3.5 lbs/ton, and from 43.6 lbs/hr to 28.4 lbs/hr.

A lower PM_{10} emission limit was proposed by Knauf in the supplemental BACT analysis. *See* Supp. BACT Analysis at 23-24. The

[7]Emission limits for the fiberglass industry are commonly expressed in pounds per ton of glass pulled or "lbs/ton." The permit expresses the PM_{10} emission limit in units of both lbs/hour and lbs/ton.

[8]The definition of BACT encompasses "production processes * * *, systems, and techniques," as well as add-on pollution devices. *See* CAA § 169(3), 42 U.S.C. § 7479(3); 40 C.F.R. § 52.21(b)(12).

lower limit is made possible by two factors. First, Knauf improved the efficiency of its process technology and conducted stack tests at its Alabama plant to derive an actual emission rate that is lower than the rate used in the original permit application.[9] This rate reflects the expected emissions without a wet electrostatic precipitator (WEP), a type of add-on pollution control equipment. Second, Knauf obtained a slightly higher guaranteed WEP control efficiency from its WEP vendor. The combination of these two factors yielded a proposed PM_{10} emission limit of 3.9 lbs/ton. Supp. BACT Analysis at 24.

SCAQMD tightened Knauf's proposed emission limit even further by requiring Knauf's process efficiency efforts at the new Shasta Lake facility to match the more recent performance of the Alabama plant. SCAQMD recalculated expected PM_{10} emissions prior to treatment by the WEP by using the three best stack test results from the Alabama facility. Revised Evaluation at 21. SCAQMD ultimately selected a PM_{10} emission limit of 3.5 lbs/ton. *Id.* at 22. This value was included in the revised permit. Revised Permit ¶ 52.

With this background, we now turn to the petitioners' objections to the revised BACT determination. The petitions for review pose many of the same arguments set forth in *Knauf I* to challenge the adequacy of the revised BACT determination. These arguments were persuasive in the prior appeal because support for the BACT determination in the administrative record was weak. The more thorough justification now before us adequately addresses petitioners' arguments and the questions we posed in *Knauf I*. *See Knauf I*, slip op. at 27 (identification of open questions that need to be addressed in order to assess SCAQMD's BACT determination).

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[9]The stack tests from Knauf's Alabama plant can provide relevant data for the proposed Shasta Lake facility because the Alabama plant uses the same process technology as planned for Shasta Lake as well as wet/venturi scrubbers for emission control. The Alabama plant does not have a WEP.

1. *Availability of Proprietary Process Technology*

One of the arguments raised in *Knauf I* was that Knauf ought to be required to obtain and employ a fiberglass manufacturing process technology from one of its competitors, i.e., CertainTeed Corporation. *See Knauf I*, slip op. at 29. We noted that while "inherently lower-polluting processes" should be considered during the BACT selection process, *see id.* at 12, and there must be "serious consideration of pollution control designs for other facilities that are a matter of public record," *id*. at 29 n.34, the permit applicant does not have an obligation to pursue its competitors' trade secrets. *Id.* Petitioners in the present appeal suggest that efforts by Knauf and SCAQMD to assess the availability of other process technologies were inadequate. *See, e.g.*, Petition 99-29 at 5.

The administrative record indicates that Knauf made several attempts to obtain information about process technologies used by other fiberglass manufacturers, including reviewing federal databases, reviewing permits issued to other fiberglass manufacturing plants, and filing Public Records Act (CA) and Freedom of Information Act (federal) requests for information. Supp. BACT Analysis at 11-12. SCAQMD also contacted air quality agencies that had issued permits to other fiberglass plants to seek information on process technologies. Revised Evaluation at 18. Information on process technology has been historically treated as proprietary and confidential by the fiberglass industry, and this position was again asserted in response to the inquiries by Knauf and SCAQMD. *See* Supp. BACT Analysis app. I (contains documentation of legal action or threats of legal action against Knauf and Knauf's attorneys by competitor companies). Faced with this information, SCAQMD concluded that use of a competitor's process technology was not a feasible control option for the proposed Knauf plant. Revised Evaluation at 18.

In *Knauf I*, we described the sequential elements of a BACT selection process. *Knauf I*, slip op. at 12-14. The process begins with an investigation of a variety of potential control technologies, consisting

of both process technologies or practices and add-on controls. While BACT selection often focuses on add-on controls, we noted that it is legitimate to expect a permitting authority to also include process technologies in the list of available control options if any are available. *Id*. at 29 n.34. Process technology that is treated as proprietary and confidential, however, will not likely qualify as "available" for purposes of BACT. If that is the case, such technologies may be eliminated from the BACT consideration process. In this case, Knauf and SCAQMD investigated the availability of process technology used by other fiberglass manufacturers, learned that it was treated as proprietary and confidential, and concluded that such technology was not available for purposes of BACT. SCAQMD's decision on the non-availability of alternative process technology is adequately justified by the record.[10]

2. *Size of Wet Electrostatic Precipitator*

A wet electrostatic precipitator (WEP) is an add-on pollution control device for PM_{10} that uses electrical forces to remove PM_{10} from an emission gas stream and deposits the particulate onto collection plates. Supp. BACT Analysis at 14. According to SCAQMD's analysis, a WEP is the most effective add-on control device available for PM_{10} emissions from a fiberglass manufacturing plant.[11] Revised Evaluation at 18.

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[10]A decision that alternative process technology is not available does not exempt a permit applicant and permitting authority from fully investigating add-on pollution controls. *Knauf I*, slip op. at 29 n.34. On remand, Knauf and SCAQMD documented an investigation of add-on controls, and as described in this section, this supplemental search and analysis was satisfactorily performed.

[11]Other add-on control technologies discussed in the supplemental BACT analysis and the revised evaluation included wet scrubbers, spray towers, and baghouses. Supp. BACT Analysis at 13; Revised Evaluation at 14. SCAQMD ranked the available add-on control technologies in order of stringency as follows: (1) wet scrubbers followed by a WEP; (2) wet scrubbers only; (3) spray towers. Revised Evaluation at 18. Baghouses were eliminated as technically infeasible because they are used only where

(continued...)

Petitioners have not challenged the selection of WEP technology as the most stringent add-on emission control. However, the petitions question the size of the WEP planned for the Knauf facility. *See, e.g.*, Petition 99-37 at 6 (challenging SCAQMD's determination that a larger WEP is not available). We posed a similar question in *Knauf I*. *Knauf I*, slip op. at 27.

The supplemental BACT analysis contains an economic and removal efficiency analysis associated with increasing the size of the WEP as designed for the Knauf facility. Supp. BACT Analysis at 16-17. The analysis examines the additional costs and PM_{10} removals for WEPs 1.5 and 2 times larger than the WEP as designed. The analysis indicates that the PM_{10} emission rate can be reduced by 0.2 lbs/ton with a WEP one and half times larger than the current design and by 0.3 lbs/ton with a WEP that is twice as large. *Id.* at 16. The price for these incremental emissions reductions is estimated at between $43,000 and $54,000 per ton of additional PM_{10} removed. *Id.*

The economic and removal efficiency analysis presented in the supplemental BACT analysis is largely a hypothetical discussion, because no vendor has proposed to provide a WEP of the magnitudes suggested. Of the three vendor proposals received, Knauf chose the largest WEP offered. Supp. BACT Analysis at 17. Petitioners argue that just because a larger WEP was not offered by a vendor does not mean that a larger WEP would not have been available. Petition 99-37 at 6. While it may be physically possible to construct a larger WEP, we believe that SCAQMD's decision to require the WEP as recommended in the supplemental BACT analysis is reasonable given the low incremental PM_{10} removal and high incremental costs associated with a larger device.

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[11](...continued)
PM_{10} exhaust is dry. *Id.*

3. *Multiple WEPs*

The petitions for review filed during *Knauf I* pointed out that fiberglass manufacturing facilities owned by CertainTeed Corporation use multiple WEPs for PM_{10} control. *See Knauf I*, slip op. at 24. We questioned why SCAQMD had not investigated whether the use of a different WEP configuration would result in better emissions reduction. *Id.* at 27. Petitioners raise this point again in this proceeding. *See, e.g.*, Petition 99-10 at 2; Petition 99-21 at 4-6; Petition 99-37 at 6-7.

SCAQMD noted that CertainTeed manufacturing facilities in Chowchilla, California, and Kansas City, Kansas, use multiple WEPs, but that these devices "are not used in series or in any other configuration . . . that would improve emission control efficiency." Revised Evaluation at 17. SCAQMD further explained in the response to comments that the CertainTeed WEPs are each treating a portion of the air flow from its manufacturing process, whereas the WEP designed for Knauf will treat the entire process air flow.[12] Resp. to Comments at 23. SCAQMD concluded that the exhaust air from the CertainTeed facilities and from the proposed Knauf facility would receive the same emission control. *Id.* The decision of whether to approve, as BACT, the use of one WEP that treats the entire emission stream rather than multiple WEPS, each of which treats a portion of the emissions stream

[12]SCAQMD's statement that CertainTeed's "WEPs are sized only for a reduced portion of the air flow" elicited an objection from CertainTeed in its petition for review. Petition 99-66 at 1. CertainTeed objects to the characterization of its pollution control devices as sized to handle only a portion of process exhaust. CertainTeed states, "[e]ach of CertainTeed's WEPS * * * are sized properly to handle all of the exhaust from the corresponding processes, not just a portion." *Id.* In response to CertainTeed's petition, SCAQMD attempts to clarify that its use of the phrase "reduced portion of the air flow," was simply intended to distinguish CertainTeed's method of treating portions of air flow by individual WEPs from Knauf's proposed method of treating the entire exhaust stream with wet scrubbers and one large WEP. Resp. to Petition 99-66 (AR 11,355). We believe that the issue raised by CertainTeed in its petition is largely one of semantics rather than substance and does not merit a grant of review.

is one that we can comfortably leave to the technical expertise of the permitting authority. We are satisfied that SCAQMD investigated and considered other control technology configurations used in practice and documented the reasons for its decisions in the administrative record.

4. *Selection of the PM_{10} Emission Limit*

Many of the petitions for review raise objections to the PM_{10} emission limit in the revised permit. Even though the PM_{10} limit was revised downwards to 28.4 lbs/hr and 3.5 lbs/ton, petitioners are dissatisfied because PM_{10} emission limits at CertainTeed facilities in California and Kansas are lower still.[13] *See, e.g.*, Petition 99-10 at 2; Petition 99-33 at 2; Petition 99-37 at 10.

We noted in *Knauf I* that emission limits for different facilities may differ, even if identical control technology is applied. *Knauf I*, slip op. at 30. For example, the two CertainTeed facilities in question each use a combination of wet scrubbers and WEPs for PM_{10} control, yet their permitted PM_{10} emission limits differ. In fact, the Kansas City facility has a higher PM_{10} emission limit than the Chowchilla facility although the Kansas City facility is newer. *See id.* at 23; Supp. BACT Analysis at 24-25; Revised Evaluation at 16; Resp. to Comments at 12.

Here, SCAQMD explains the difference between the CertainTeed limits and the limit it set for the proposed Knauf facility by pointing to the underlying proprietary processes used by each of the companies. SCAQMD notes that the process technologies and product

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[13]The materials filed with this appeal contain a fair amount of debate and discussion regarding what the emission limitations for the CertainTeed facilities actually are. The permits for the CertainTeed facilities express PM_{10} limits differently from the way PM_{10} limits are expressed in the revised permit for the proposed Knauf facility. We need not address the various issues regarding how CertainTeed's PM_{10} limits compare to Knauf's because we find that SCAQMD's explanation of the reasons for the differences is adequate.

blends for individual fiberglass manufacturing facilities differ, and these differences will yield emission limitations that are specific to a particular facility. Resp. to Comments at 12; Resp. to Petition 99-37 (AR 11,316). We agree that numerical emission limitations under the PSD program are individualized for specific facilities and we believe that SCAQMD has adequately justified the emission limitations in the revised permit for the proposed Knauf plant as compared to other fiberglass manufacturing facilities.

A few of the petitioners not only question the PM_{10} emission limit as compared the PM_{10} limits at the CertainTeed facilities, but also question the factors used to derive the numerical limit of 3.5 lbs/ton. *See, e.g.,* Petition 99-10 at 5; Petition 99-29 at 6.

SCAQMD used the following equation to derive the PM_{10} emission limitation for the proposed Knauf facility:

Actual PM_{10} emissions (Lanett) x 1.25 (safety factor) x WEP efficiency factor

Revised Evaluation at 22. The equation begins with an average value for PM_{10} emissions from Knauf's facility in Lanett, Alabama. That value is multiplied by a safety factor to take into account process variability and then multiplied again by the WEP efficiency factor as guaranteed by the WEP manufacturer. Petitioners question use of the Lanett emissions level and the safety factor.

Petition 99-29 objects to the use of emissions data from Knauf's Lanett, Alabama facility as a basis for the emission limitation in the proposed Shasta Lake plant. Petition 99-29 at 6. This petitioner believes that the Lanett emissions levels may be inflated so as to obtain a more generous emission limit for Shasta Lake. *Id.* The petitioner also contends that it is improper for SCAQMD to set emission limits based on Knauf's historical performance when Knauf has no incentive to lower its emission levels. *Id.* SCAQMD responds that the stack tests from which the emissions data were produced were witnessed by Alabama officials who provide "third-party objectivity" to the data. Resp. to Petition 99-29

(AR 11,306). SCAQMD also defends its approach of setting an emission limit based on actual emission tests from a similar facility. *Id*. SCAQMD believes that use of actual emissions data from the very same process that will be employed in the proposed facility is the best way to set an emission limitation.

The petitioner may be correct that Knauf has no incentive to lower emissions from its Lanett, Alabama facility. But in fact, the data collected from Lanett show PM_{10} emissions significantly lower than the permitted emission limitation for that facility. Supp. BACT Analysis app. M. Thus, even without an incentive, Knauf achieved lower emissions at Lanett. SCAQMD reasonably decided to require the same level of performance at the proposed facility in Shasta Lake.

Another petitioner questions the need for a 25% safety factor (represented as 1.25 in the above equation) for process variability. The safety factor essentially incorporates a margin of error in the calculation of an emission limitation. The petitioner suggests that the PM_{10} emission limitation should be set without regard to a safety factor. Petition 99-10 at 5. SCAQMD responds that a 25% "variability" factor is appropriate in light of potential variations in the fiberglass insulation manufacturing process, which is affected by glass pull rates, temperature, and humidity. In addition, a safety factor can be used to protect against test method variability. Resp. to Comments at 24; Resp. to Petition 99-10 (AR 11,284).

There is nothing inherently wrong with setting an emission limitation that takes into account a reasonable safety factor. The resulting emission limitation is still an enforceable cap on PM_{10} emissions. The inclusion of a reasonable safety factor in the emission limitation calculation is a legitimate method of deriving a specific emission limitation that may not be exceeded. SCAQMD adequately explained why it set the limit where it did, and Petitioners did not meet their burdens of showing why SCAQMD's decision in this case was clearly erroneous or an abuse of discretion.

In sum, we deny review of all issues raised in the petitions for review regarding the revised BACT determination for the proposed Knauf facility.

C. *Environmental Justice*

The issue of environmental justice as presented in this case refers to allegations made by members of the public that the issuance of a PSD permit for the proposed Knauf facility may disproportionately impact a low-income population. This issue was invoked through reference to an Executive Order that instructs federal agencies to address, as appropriate, "disproportionately high and adverse human health or environmental effects of [their] programs, policies, and activities on minority and low-income populations * * *." Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994) ("Executive Order").

Our treatment of environmental justice in *Knauf I* was largely on procedural grounds. The administrative record indicated that the issue of environmental justice pursuant to the Executive Order had been properly raised before SCAQMD, but there was no documentation of a substantive response or analysis of the issue. *Knauf I*, slip op. at 71. SCAQMD asserted that EPA Region IX had taken responsibility for addressing environmental justice and SCAQMD relied on the Region's representations. Our remand order instructed SCAQMD to obtain documentation of the Region's alleged environmental justice analysis, to include it in the administrative record, and make it available for public comment. *Id.* at 72.

SCAQMD obtained documentation of Region IX's environmental justice analysis, which consists of two memoranda analyzing the demographics of the area surrounding the proposed Knauf facility and assessing whether the emissions from the facility will have a disproportionately high and adverse impact on human health or the environment. Memorandum from Willard Chin, Region 9 Environmental

Justice Team, to Michael Kussow, Shasta County Air Pollution Control Officer (Mar. 18, 1999) (AR 8220) ("EJ Memorandum"); Addendum to the EJ Review Memorandum (Apr. 7, 1999) (AR 8369) ("EJ Addendum").[14]

Both the EJ Memorandum and the EJ Addendum were made available during the public comment period on the revised permit. EPA Region IX prepared a response to comments on the environmental justice analysis. EPA's Response to Public Comments on the Knauf Environmental Justice Review (Aug. 12, 1999) (AR 9644) ("EPA Resp. to Comments on EJ").

In each of the three documents prepared by Region IX regarding environmental justice, the Region concluded that the proposed Knauf facility will not have disproportionately high and adverse human health or environmental effects on a minority or low-income population. EJ Memorandum at 6; EJ Addendum at 2; EPA Resp. to Comments on EJ at 2. The Region's adverse impacts conclusion is based on its finding that the Shasta County area has been designated as an attainment area for PM_{10} and that the additional PM_{10} from the proposed Knauf facility will not exceed the federal NAAQS or PSD increment for PM_{10}. EJ Memorandum at 4; EJ Addendum at 2. The Region states, "the air quality within the area surrounding the proposed site would remain well within the levels determined to [be] healthful and environmentally acceptable." EJ Memorandum at 4. In response to a comment regarding potential impacts on sensitive subpopulations, the Region noted that the NAAQS are designed to protect public health. EPA Resp. to Comments on EJ at 7. *See also* 40 C.F.R. § 50.2(b) (NAAQS are set at levels that EPA has determined are necessary to protect the public health and welfare).

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[14]The EJ Addendum was prepared because the EJ Memorandum incorrectly identified the location of the proposed facility, placing it approximately two miles northeast of the actual location.

Petitioners object to numerous aspects of the Region's environmental justice analysis, including the methodology and data used for the demographic analysis, and the scope of the adverse impact analysis. *See, e.g.*, Petition 99-10 at 7; Petition 99-29 at 3-4; Petition 99-37 at 13-20. None of the petitioners, however, have shown that the Region's conclusion regarding the lack of adverse impacts from PM_{10} emissions is clearly erroneous. As there has been no serious contention that the additional PM_{10} emissions from the proposed facility would in fact lead to an adverse impact, and as the Executive Order concerns itself with effects that are "adverse," we find it unnecessary to address petitioners' other objections, including those relating to the demographic analysis.

Several petitioners raised issues about the quantity and quality of the public participation in SCAQMD's permitting process. *See, e.g.*, Petition 99-9 at 8; Petition 99-13 at 10; Petition 99-29 at 4; Petition 99-33 at 5. While the petitioners uniformly assert that meaningful opportunities for public participation were lacking, SCAQMD represents that it engaged in proactive community involvement. In light of the disconnect between the impressions of the community and the permitting authority, it is no surprise that this case led to two Board appeals. Our review of the public participation record here shows that SCAQMD fulfilled the applicable regulatory obligations, even if it did not go beyond those requirements.

We note, however, that the public's involvement over the course of this permitting process has had a significant role in shaping the conditions of the PSD permit that was ultimately issued to Knauf. The PM_{10} emission limit in the revised permit is less than half the level of PM_{10} emissions proposed by Knauf in its initial permit application. From our review of the record, it appears that these reductions are largely attributable to the active community interest and involvement in the permit process. *See In re AES Puerto Rico L.P.*, PSD Appeal Nos. 98-29 through 98-31, slip op. at 35-36 (EAB, May 27, 1999), 8 E.A.D. __ (identifying specific conditions that were incorporated into a PSD permit as a result of concerns raised during the public comment period), *aff'd*

Sur Contra La Contaminacion v. EPA, 202 F.3d 443 (1st Cir. 2000) ("That the permit issued here is particularly stringent may be due in large part to the participation of the area residents."). Thus, although petitioners may not be fully satisfied with the type of public participation that occurred here, it was, in fact, effective in securing an environmental benefit through lower emissions.

We deny review of both the substantive and procedural environmental justice issues raised in this appeal.

D. *Permit Compliance with NESHAP Rule*

In June 1999, EPA promulgated a final National Emissions Standards for Hazardous Air Pollutants ("NESHAP") rule for the fiberglass manufacturing industry. 64 Fed. Reg. 31,695 (June 14, 1999). This rule sets hazardous air pollutant emissions standards for fiberglass manufacturing facilities such as the proposed Knauf facility. Petitioners argue that the requirements of the NESHAP should be specifically enumerated in the PSD permit. Petition 99-37 at 25. SCAQMD points out that the permit has a specific provision noting that the Knauf facility will be subject to the new NESHAP. Revised Permit ¶ 10; Resp. to Petition 99-37 (AR 11,316). The permit condition further notes that emission limits in the NESHAP "do not supersede more stringent limits found in other conditions of this permit." Revised Permit ¶ 10. SCAQMD believes that it would be "unnecessary and impracticable to enumerate all of the requirements of the NESHAP" in the PSD permit. Resp. to Petition 99-37 (AR 11,316). Based on the circumstances presented here, we agree. The permit condition that cross-references the NESHAP is sufficient to incorporate all applicable provisions of the new rule into the PSD permit. Moreover, the NESHAP is independently enforceable. Review is denied on this issue.

III. *CONCLUSION*

The petitions for review of the revised PSD permit decision issued by SCAQMD for the proposed Knauf facility are denied.

SCAQMD has complied with the Board's remand order in *Knauf I*. Documentation of the revised BACT determination provides adequate justification for SCAQMD's selection of PM_{10} control technology and emission limitations. SCAQMD also made an environmental justice analysis available to the public in accordance with our earlier order. That analysis concludes that the PSD permit for the proposed Knauf facility will not cause any disproportionately high or adverse human health or environmental effects on a low-income or minority population. Finally, there is no need for review of the revised permit condition regarding applicability of the fiberglass NESHAP.

So ordered.[15]

[15]This decision constitutes final agency action for purposes of judicial review. *See* 40 C.F.R. § 124.19(f)(1)(i). Region IX shall make sure that notice of this decision is published in the Federal Register in accordance with 40 C.F.R. § 124.19(f)(2).